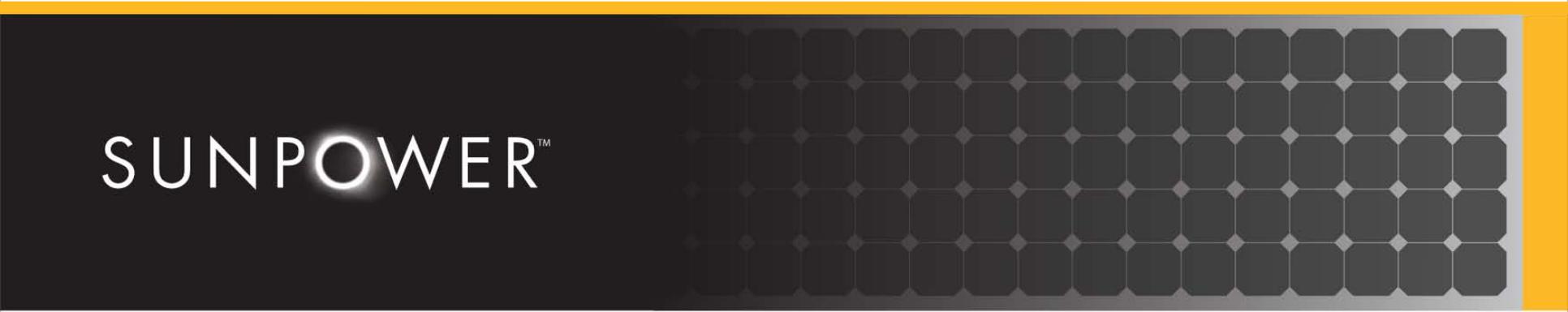


US EPA ARCHIVE DOCUMENT

The logo features the word "SUNPOWER" in a white, sans-serif font. The letter "O" is highlighted with a bright, circular glow. The background consists of a dark grey grid of solar panels, with a thin orange vertical bar on the right side.

SUNPOWER™

**INNOVATIVE ENERGY MANAGEMENT WORKSHOP**  
**February 8, 2010**

# SunPower

- 500+ MW power plants globally
- 900+ dealers and growing rapidly
- Diversified portfolio: roofs to power plants
- Founded in 1985
- Over 120 patents and 25 years of R&D
- 400 MW/yr 2009 production rate
- 5,000+ Employees; 100% solar
- Publicly listed NASDAQ: SPWRA, SPWRB



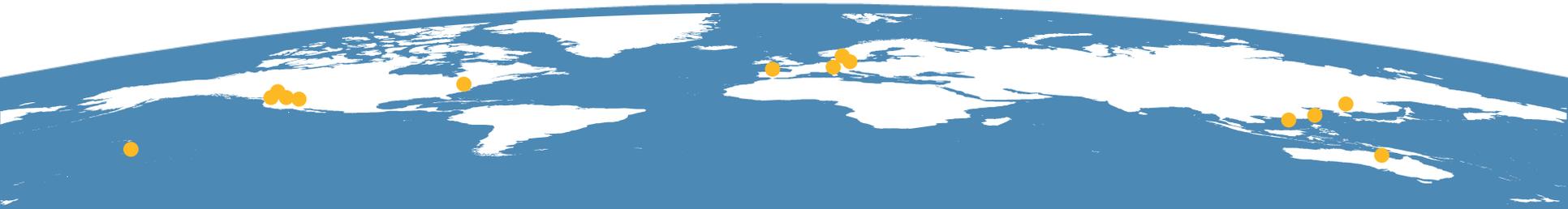
**Residential**



**Commercial**



**Power Plants**



# SunPower: Most Energy Per Meter Squared



Most powerful solar technology on the planet

Direct Control:  
Ingot through Systems



# Technology Pioneer



**PV+EE**



**PowerPlants**



**New Homes**

# Commercial/Government Segment Leadership

- Experience
  - >85 MW in roof top installations worldwide
  - Largest U.S. installed base
  - Casino (Fr): 14 MW supply agreement
  - \$100m Wells Fargo facility – new projects
- Technology
  - Patented, non-penetrating roof systems
  - T5 roof system: low cost, easy installation
  - Successfully defended rooftop patents
- Return
  - Most efficient solar panels
    - Superior temperature coefficient
    - Superior energy in low light conditions
  - Best NPV/roof



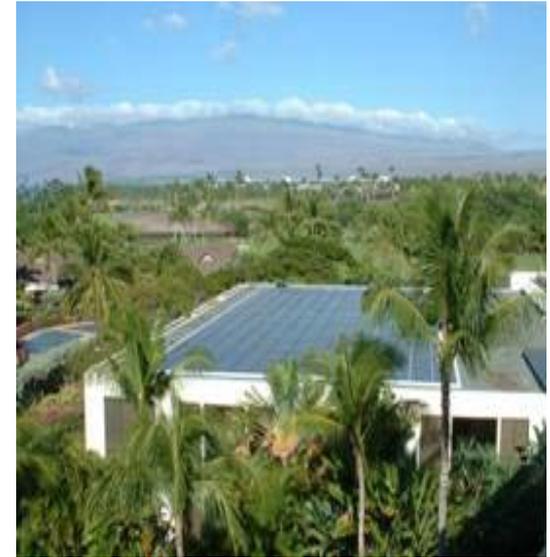
# Power Plants for Utilities

- Experience
  - Florida Power and Light
    - 25 MW energized – 2 months early
    - 10 MW in construction at Space Center
  - Exelon 8 MW project under construction
  - Xcel 17 MW in permitting
  - PG&E 210 MW in permitting
- Technology
  - T0 tracker: most W/meter<sup>2</sup>
  - T20 tracker: highest capacity factor
- Return
  - LCOE competitive with gas peaker
  - Bankability, ease of permitting



# Big Island - The Tip of the Spear

Mauna Lani Resort, Hawaii 675 kW



# Big Island - The Tip of the Spear

1998: First “commercially-financed” PV system in US,  
on roof of Mauna Lani Hotel



2000: First PV solar farm at Parker Ranch used for  
pumped hydro storage



# Big Island - The Tip of the Spear

- KTA Kamuela 216 kWp
- KTA Kona 200 kWp
- Waikoloa Village Association Two 50 kWp net metered system
- DOTA - Hilo – 111 kWp
- DOTA – Keahole – 61 kWp
- Costco Kona -680 – kWp
- Lowes - Kona - 380 kWp under contract
- Kona Commons Shopping Cntr – 800 kWp
- Target Kona - ~250 kWp
- KOYO USA – NELHA - 790 kWp
- Concentrated Solar – NELHA -

# Lana'i PV Power Plant – Project Overview

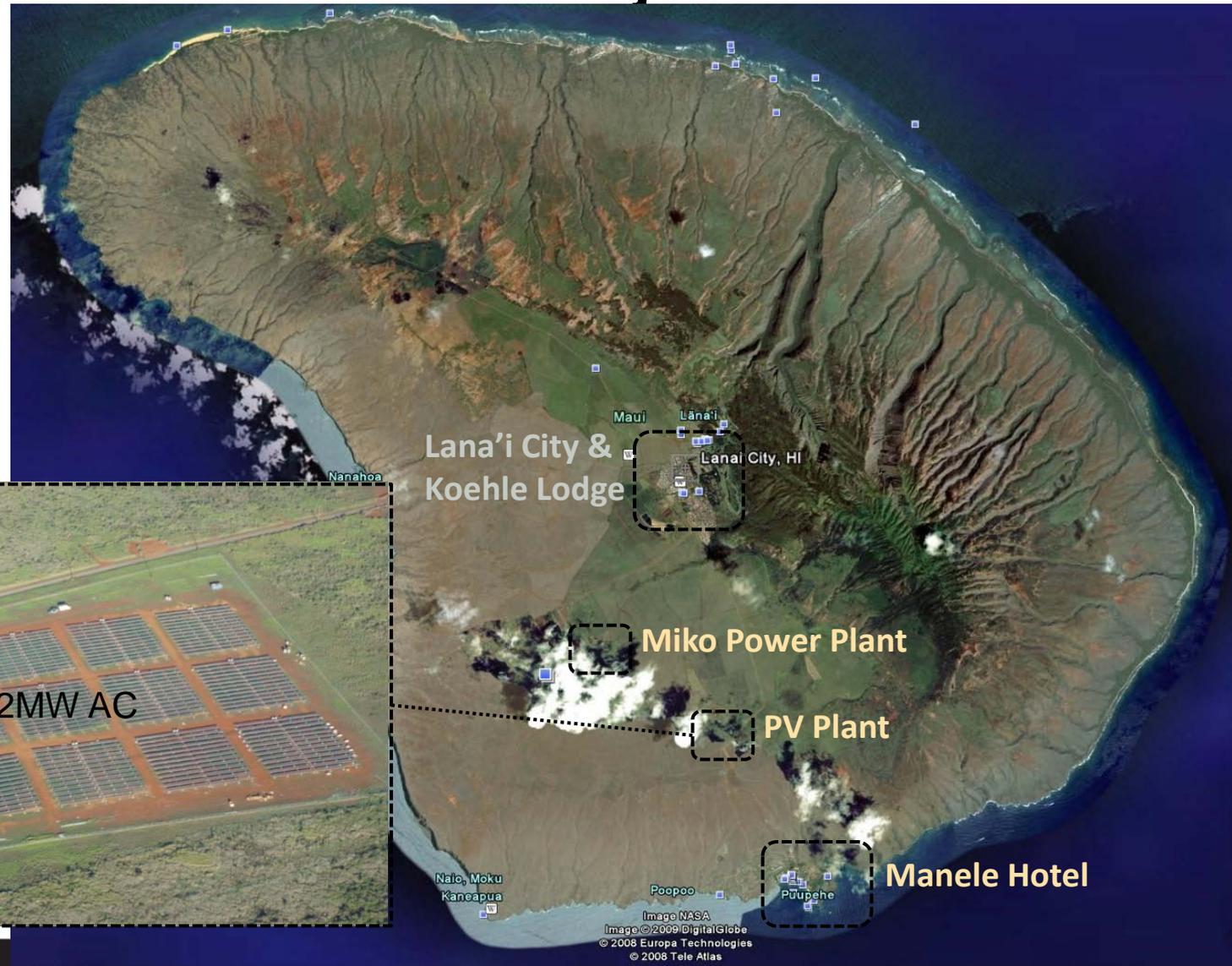


Image © 2009 DigitalGlobe  
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# Lana'i PV Power Plant – Project Overview

Overhead  
Lines to Miko  
Basin Power  
Plant

PV Array  
Inverters 1-4

PV Array  
Inverters 5-8

PV Array  
Inverters 9-12

Inverters 1-4  
15kV Switchgear

Inverters 5-9

Inverters 9-12

Overhead  
Lines to  
Manele Bay  
Hotel

SUNPOWER™

# Lana'i PV Power Plant

- Each String, 8 Panels in series:
  - Open Circuit Voltage: 544.8 VDC
  - Short Circuit Current: 3.79A
  - Maximum Power: 1.56kW @ 3.53A and 442V
- Inverter: 2 Sub Arrays, 100kW
- Farm: 12 Inverters, 1.2MW



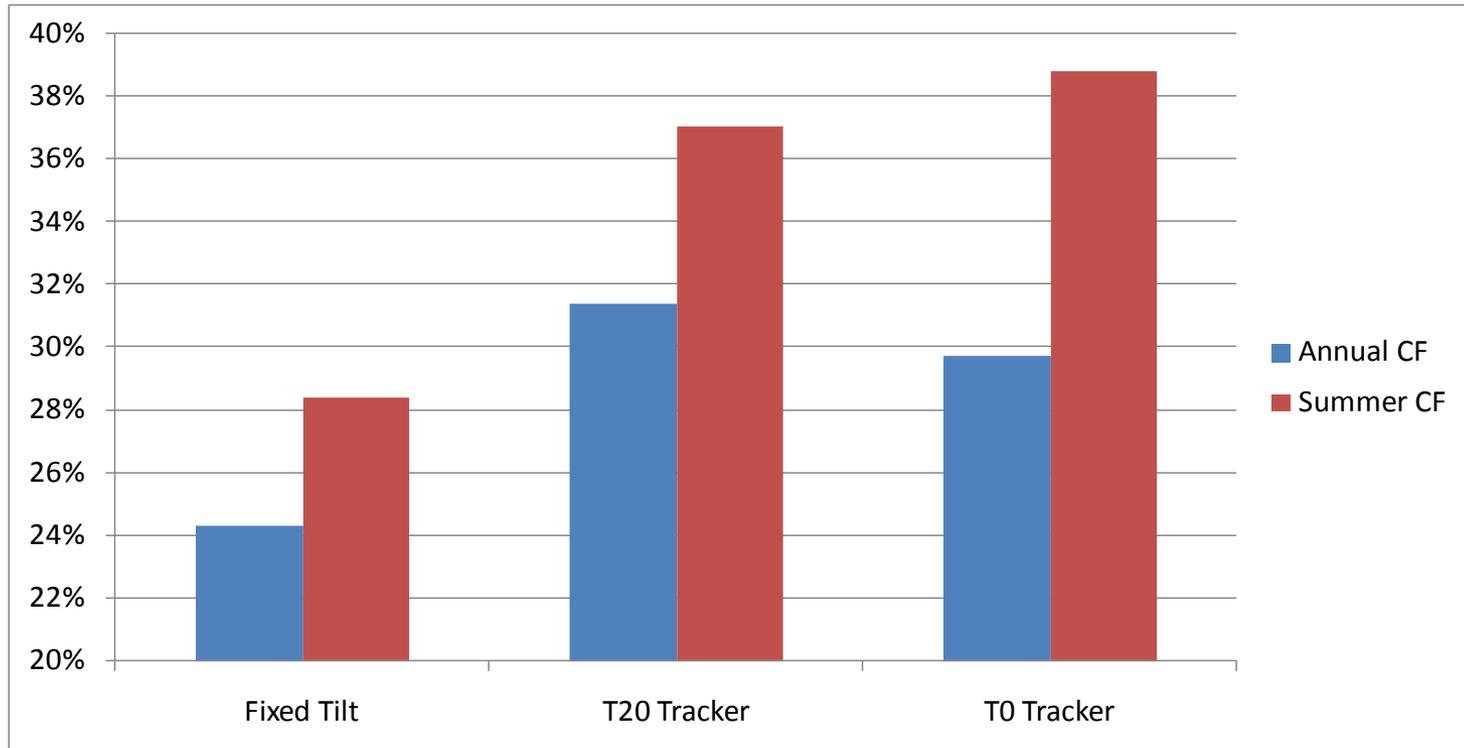
# Projects are Attracting Financing

- Wells Fargo \$100M U.S. Facility
  - Commercial Clients
  - Competitive Advantage in Closing Deals
- Montalto Project in Italy
  - 24 MW Financing Closed in September
  - Banks are moving forward with phases totaling 100MW
  - SunPower experience played major role in successful financing
- Evaluating Residential Financing Options
  - Lenders/Investors prefer working with leading technology

# PV Power Plant LCOE Drivers

- **Capital cost** dominated by PV, BOS, and land
  - PV costs driven down per experience curve + technology
  - BOS costs reduced by larger plant sizes, experience curve, and higher panel efficiencies
  - Land development costs lowered by panel efficiency and scale
- **Capacity factor** reduced with tracking systems
  - Tracking also delivers more energy during peak demand periods
- **Cost of capital** function of the perceived risk by investors
  - Proven technologies and performance lower cost of capital

# Annual and Summer Peak Capacity Factor by System Technology

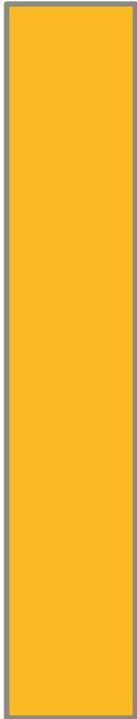


- Tracker annual Capacity Factors > 30% AC
- Peak Summer Capacity Factors > 35%
- Optimize technology choice for land use and delivery preferences

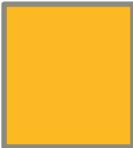
Las Vegas, NV Plant Capacity Factor based on PV Grid v.11.1

# Approximate Financed Solar Power Plant Capacity

5 GW



1 GW



0.5 GW



Silicon PV



Thin Film PV



Trough



CPV



Heliostat / Tower



CLFR CSP



Dish Sterling

# Not All Solar Projects Created Equal

- Lenders and Investors are looking for:
  - Constructive Regulatory Environment (e.g. FIT)
  - Stable Public Policy from Government
  
- Financiers Favor Solar Partners with
  - Leading Technology – Low Risk
  - Track Record of Success
  - Strong EPC History
  - Systems that provide Long Term Value
  - Financial Stability and Solid Balance Sheet



# SunPower Power Plants: any scale, anywhere, fast

